ABSTRACT

The Increased power needed to drive the write coil in a contemporary read-write magnetic head leads to greater thermal pole tip protrusion during writer activation. This problem has been overcome by including a heat diffuser on top of the return portion of the upper coils together with a thermally conductive pedestal that connects it to the substrate. During writer activation, the joule heating generated by the write current at the coils is extracted through the heat diffuser and subsequently dissipated in the substrate. The resulting lower temperature rise in the pole tip area leads to lower thermal protrusion.